

Integrated Music Knowledge Base App

Lorenzo Pina (894396), Maksym Naumenko (899645)

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01

Challenge principali

Wikidata

L'opzionalità dei parametri in SPARQL rende difficile effettuare query efficienti che non vadano in timeout; per questa ragione abbiamo impiegato diverse strategie.

Appoggiarsi su dati sicuri

Spotify ha più di 100 milioni di canzoni nel proprio DB.
Una base così solida garantisce di navigare, in maniera esaustiva, la vita musicale di un'artista.

Questa comprende gli album e i brani di un artista, con eventuali collaborazioni.
Infine sono presenti metadati come i generi musicali degli album.

...e utilizzarli nelle query.

Uno dei problemi più comuni sorge quando Wikidata presenta dati ambigui; queste incongruenze possono presentarsi sotto diversi aspetti:

- Entità omonime
- Incongruenza tra la lingua attesa e la lingua effettiva delle label
- Informazioni incomplete o obsolete
- Identificativi di Spotify mancanti (o viceversa).

E come se non bastasse

Le difficoltà si amplificano quando le query dipendono da quelle precedenti, specialmente se in una richiesta passata i dati non sono stati trovati.

È quindi fondamentale prestare attenzione e impostare LIMIT sufficientemente bassi per ottimizzare le risposte.

02

Struttura interna

Ricapitolando

Server locale

Unisce i dati dei file e di tutti gli endpoint e li mette a disposizione

Endpoint Wikidata

Endpoint SPARQL
Endpoint per la ricerca di stringhe

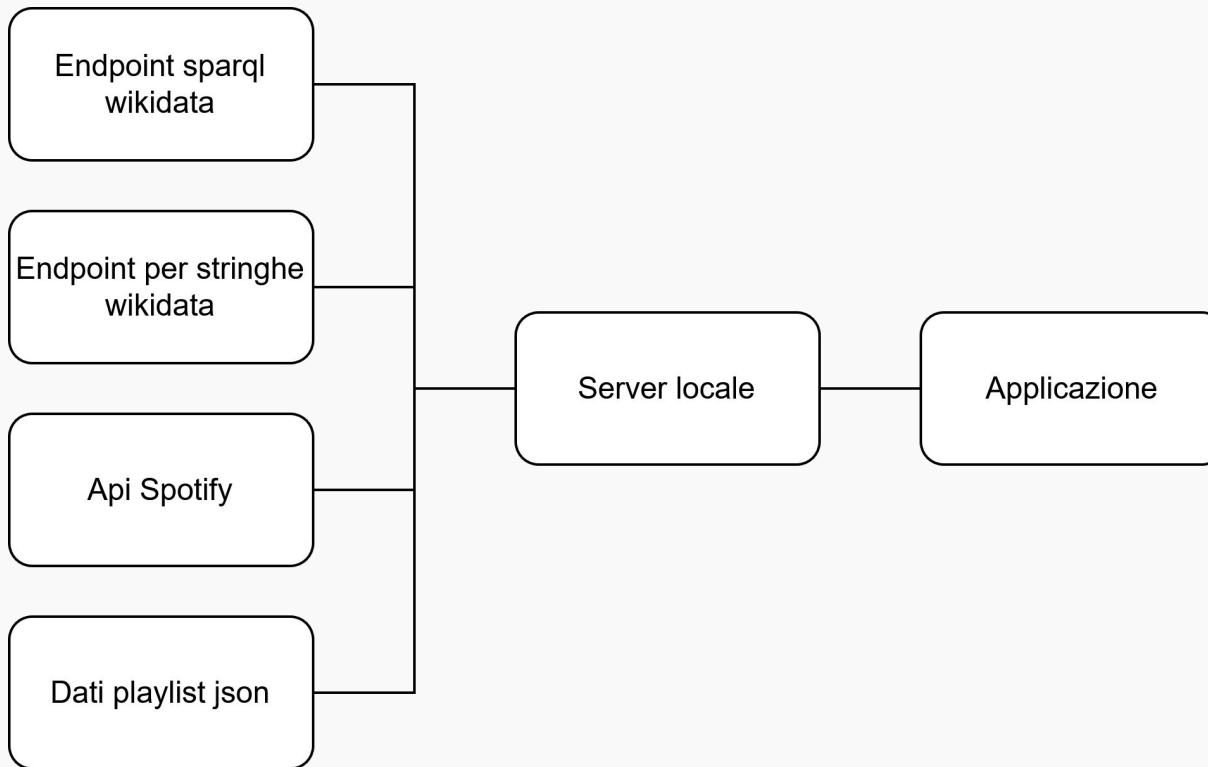
Dataset locale

spotify million playlist dataset challenge

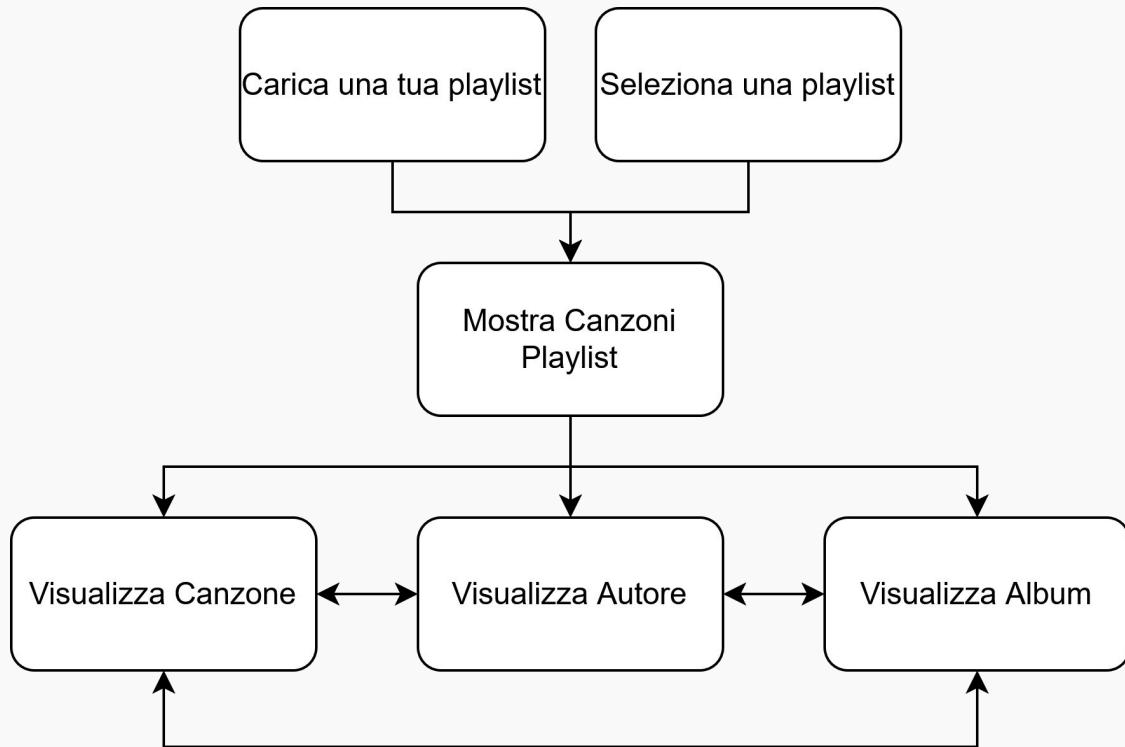
API spotify

Mette a disposizione tutti i dati di spotify

Overview generale dell'App



Navigazione del sistema



Playlists

playlist name/link/id spotify

cerca

< >

Throwbacks

Awesome Playlist

korean

mat

90s

Wedding

I Put A Spell On You

2017

BOP

old country

abby

VIBE

relax

sleep

90's

New Songs

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2017

BOP

old country

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relax

sleep

90's

New Songs

Playlist: Throwbacks

titolo	album	durata
Lose Control (feat. Ciara & Fat Man Scoop) Missy Elliott Ciara Fatman Scoop	The Cookbook	03:46
Toxic Britney Spears	In The Zone	03:18
Crazy In Love (feat. JAY-Z) Beyoncé JAY-Z	Dangerously In Love (Alben für die Ewigkeit)	03:55
Rock Your Body Justin Timberlake	Justified	04:27
It Wasn't Me Shaggy Rik Rok	Hot Shot (International Version #2)	03:47
Yeah! Usher Lil Jon Ludacris	Confessions	04:10
My Boo Usher Alicia Keys	Confessions (Expanded Edition)	03:43
Buttons The Pussycat Dolls	PCD	03:45
Say My Name Destiny's Child	The Writing's On The Wall	04:31
Hey Ya! Outkast	Speakerboxxx/The Love Below	03:55
Promiscuous Nelly Furtado Timbaland	Loose	04:02
Right Where You Want Me - Radio Edit Version Jesse McCartney	Right Where You Want Me	03:31
Beautiful Soul Jesse McCartney	Beautiful Soul	03:34

Playlist: Throwbacks

titolo	album	durata
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Promiscuous Nelly Furtado Timbaland	Loose	04:02
Right Where You Want Me - Radio Edit Version Jesse McCartney	Right Where You Want Me	03:31
Beautiful Soul Jesse McCartney	Beautiful Soul	03:34



Album: The Cookbook

Missy Elliott

Data pubblicazione: 04/07/2005

Durata: 1h 2m 11s

# titolo	durata
Joy (feat. Mike Jones) Missy Elliott	04:49
Partytime Missy Elliott	03:04
Irresistible Delicious (feat. Slick Rick) Missy Elliott Slick Rick	04:15
Lose Control (feat. Ciara & Fat Man Scoop) Missy Elliott Ciara Fatman Scoop	03:46
My Struggles (feat. Mary J. Blige & Grand Puba) Missy Elliott Mary J. Blige Grand Puba	02:52
Meltdown Missy Elliott	04:16
On & On Missy Elliott	04:45



Album: **The Cookbook**

Missy Elliott

Data pubblicazione: **Missy Elliott** 2005

Durata: 1h 2m 11s

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My Struggles (feat. Mary J. Blige & Grand Puba) Missy Elliott Mary J. Blige Grand Puba	02:52
Meltdown Missy Elliott	04:16
On & On Missy Elliott	04:45



Artista: Missy Elliott

2.6M followers

hip hop

Inizio carriera: 01/07/1971

Michael Jackson Video Vanguard Award

honorary doctor of the Berklee College of Music

Rock and Roll Hall of Fame

Numero di risultati: 1487

<

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Artista: Missy Elliott

2.6M followers

hip hop

Inizio carriera: 01/07/1971

Michael Jackson Video Vanguard Award

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Rock and Roll Hall of Fame

Numero di risultati: 1487

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Album: Respect M.E.

Missy Elliott

Data pubblicazione: 04/09/2006

Durata: 1h 7m 53s

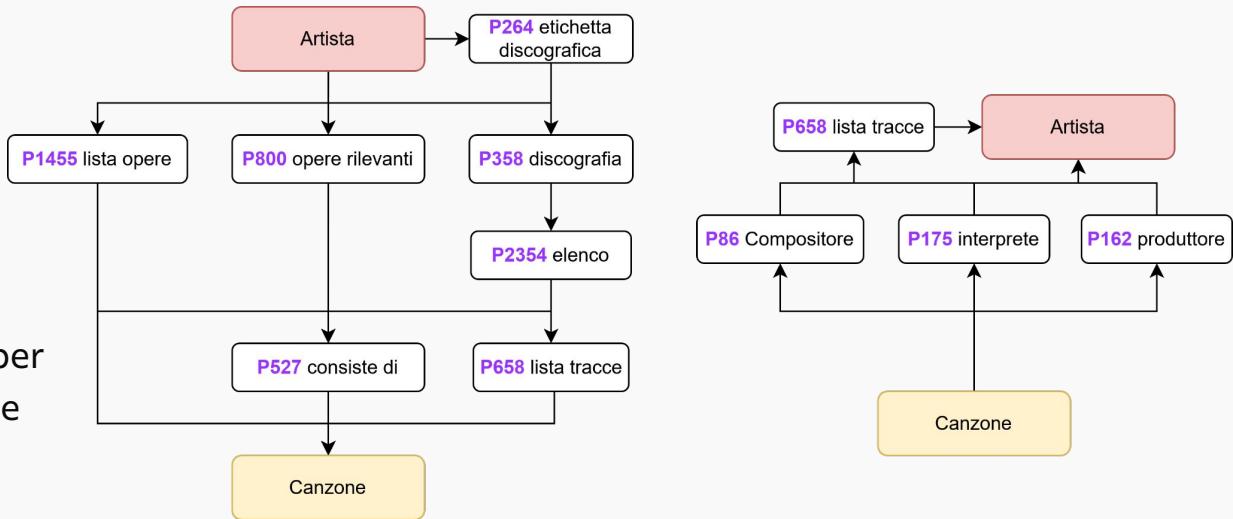
# titolo	durata
Get Ur Freak On Missy Elliott	03:56
Lose Control (feat. Ciara & Fat Man Scoop) Missy Elliott Ciara Fatman Scoop	03:46
4 My People - Basement Jaxx Remix; Radio Edit Missy Elliott Basement Jaxx	03:36
We Run This - without Manicure Interlude Missy Elliott	03:24
Work It Missy Elliott	04:23
Gossip Folks (feat. Ludacris) Missy Elliott Ludacris	03:54
One Minute Man (feat. Ludacris) Missy Elliott Ludacris	04:12

03

API Esterne

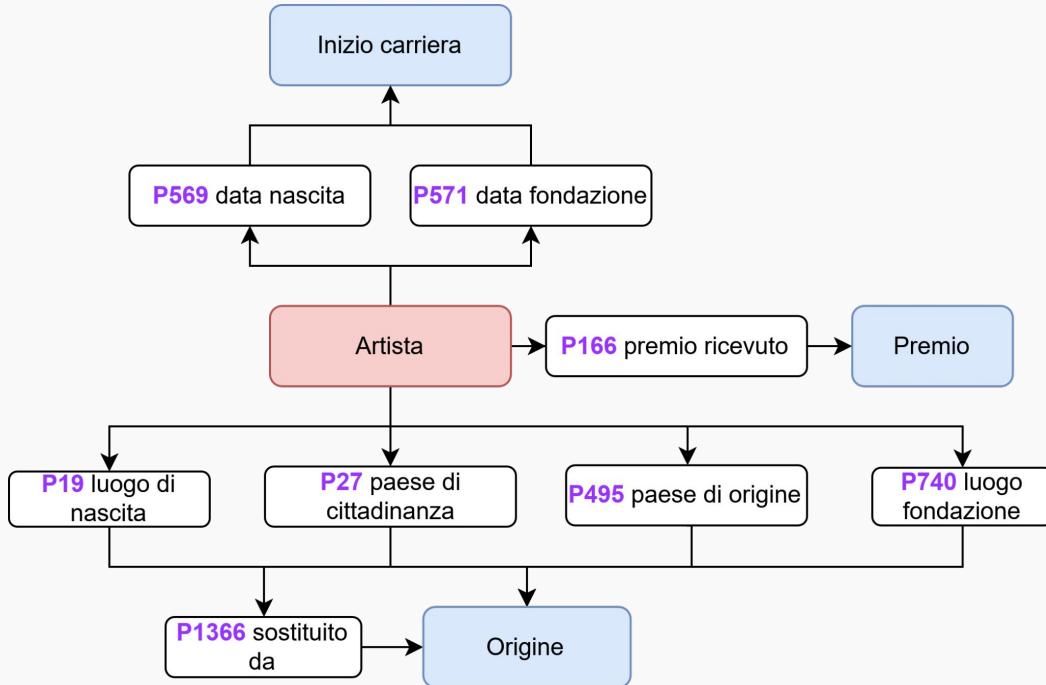
Canzoni Artista

Utilizza property in wikidata per restituire tutte le canzoni fatte da un artista



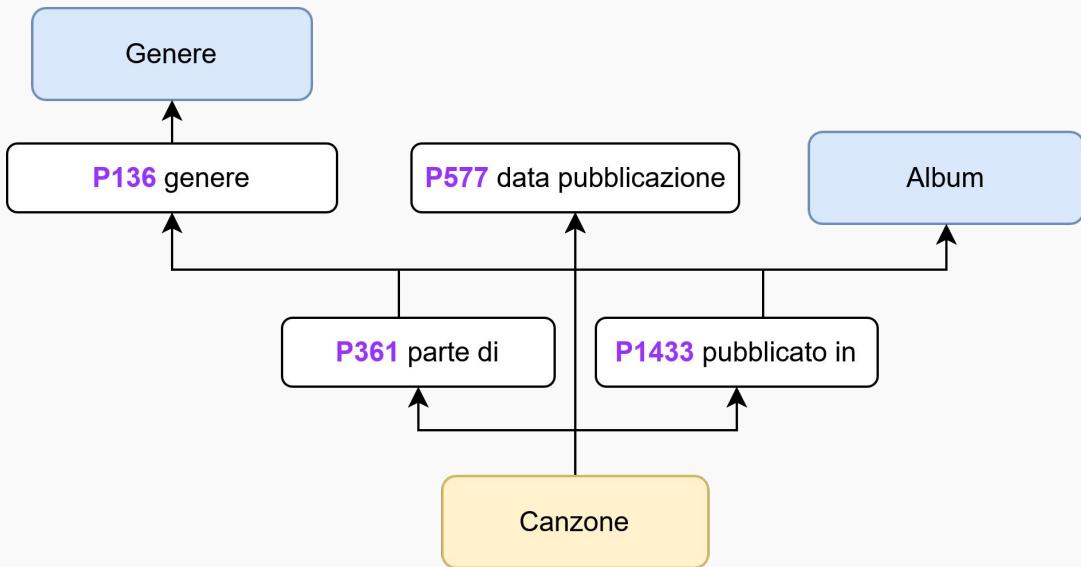
Informazioni Artista

Utilizza property in wikidata per restituire data di nascita, luogo di nascita con coordinate e premi relativi ad un artista



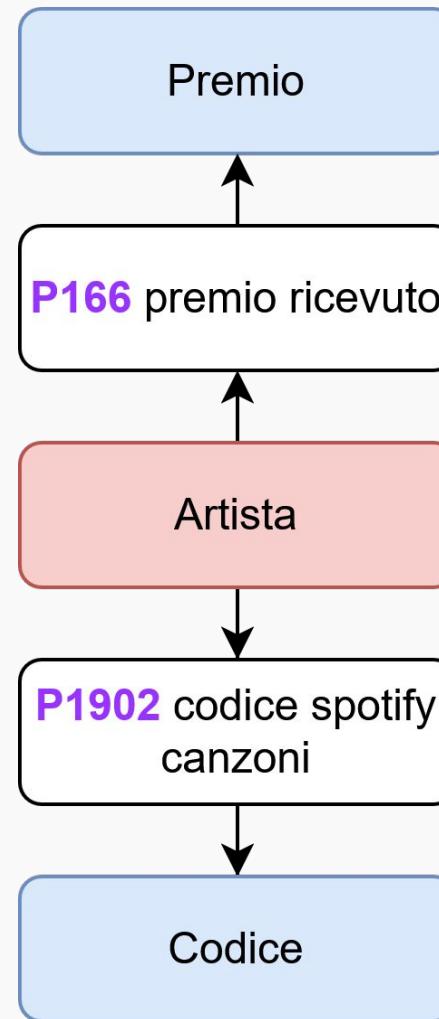
Informazioni Canzone

Utilizza property in wikidata per restituire data di pubblicazione, album e genere di una canzone



Artista da Premio

Utilizza property in wikidata per restituire il suggerimento di un artista dato un premio

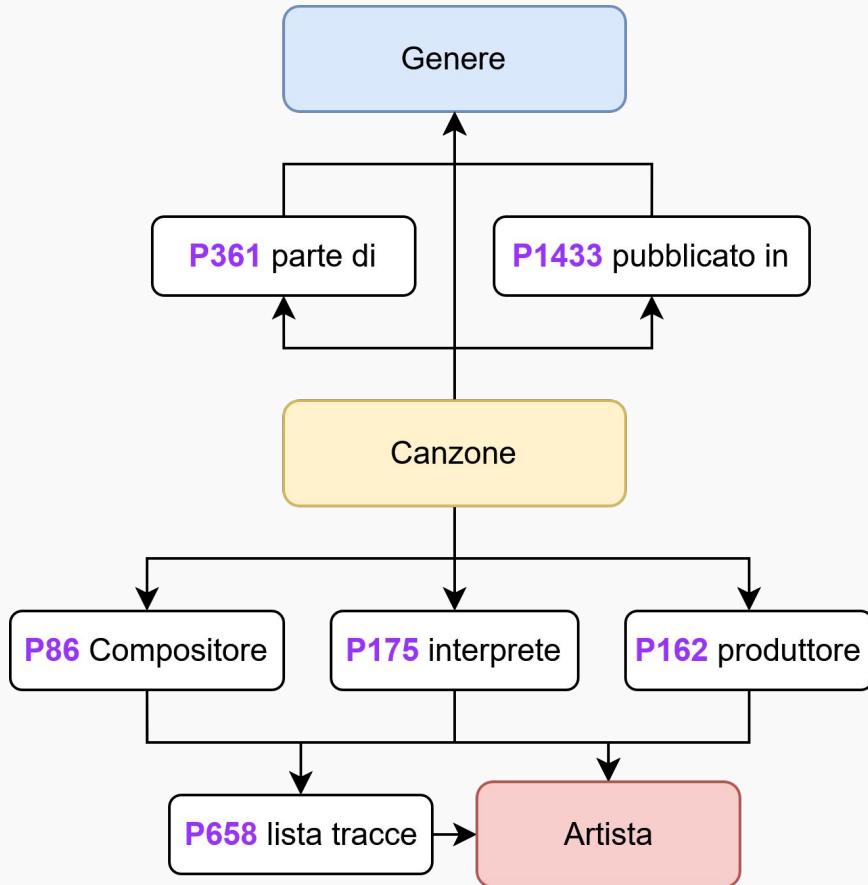


Altre API utilizzate

- Spotify
- Leaflet: per le mappe
- Highcharts: per i grafici

Canzone da Genere

Utilizza property in wikidata per restituire un suggerimento per le canzoni dato il genere



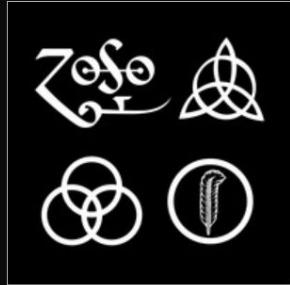
04

Interazioni Inusuali

You can enter a subtitle here if you
need it

Artista (wikidata)

Visualizzare la cronologia delle sue pubblicazioni.



Artista: Led Zeppelin

15.1M followers

classic rock rock hard rock rock and roll

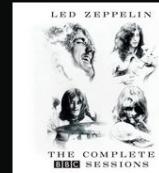
Inizio carriera: 01/01/1968

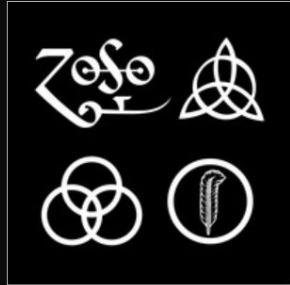
Grammy Lifetime Achievement Award

Rock and Roll Hall of Fame

Kennedy Center Honors

Numero di risultati: 33





Artista: Led Zeppelin

15.1M followers

classic rock rock hard rock rock and roll

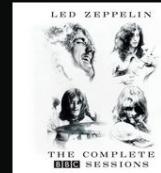
Inizio carriera: 01/01/1968

Grammy Lifetime Achievement Award

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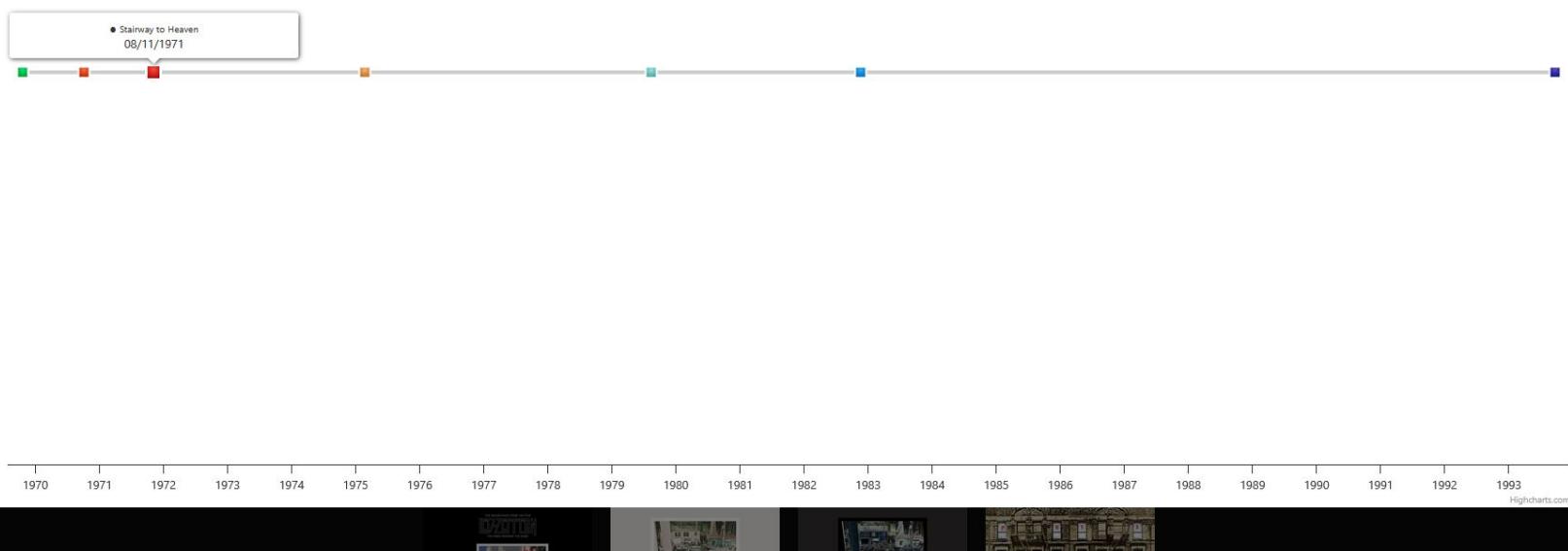
Numero di risultati: 33



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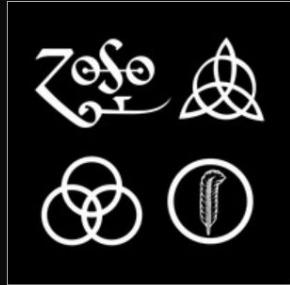
Pubblicazioni

informazioni wikidata su 12 pubblicazioni.



Artista (wikidata)

Visualizzare il suo luogo di nascita.



Artista: Led Zeppelin

15.1M followers

classic rock rock hard rock rock and roll

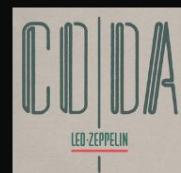
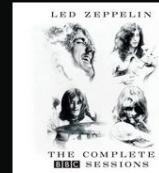
Inizio carriera: 01/01/1968

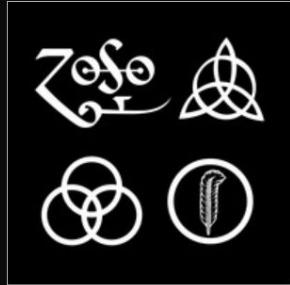
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Artista: Led Zeppelin

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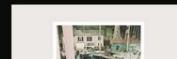
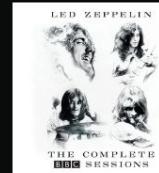
Inizio carriera: 01/01/1968

Grammy Lifetime Achievement Award

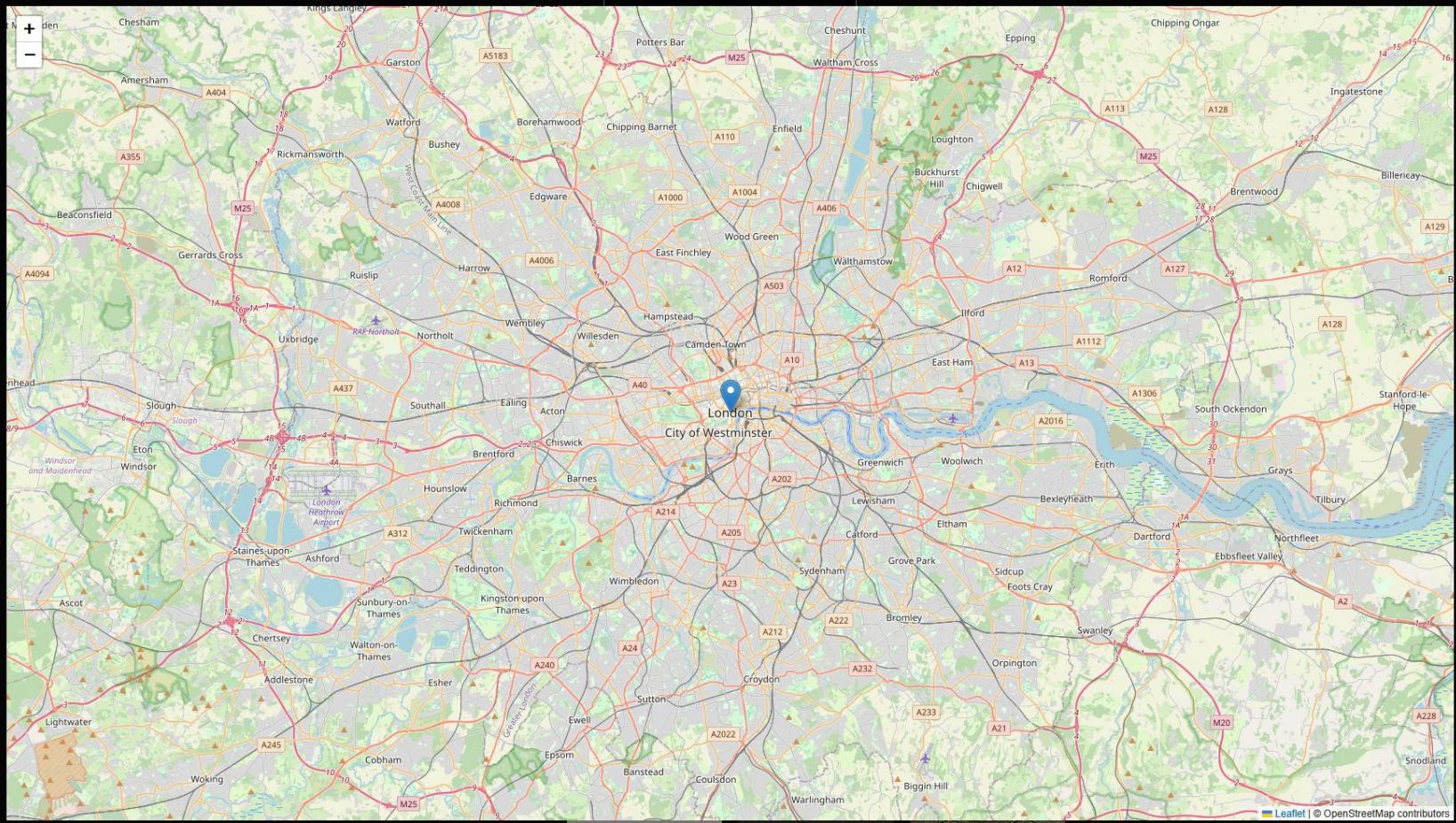
Rock and Roll Hall of Fame

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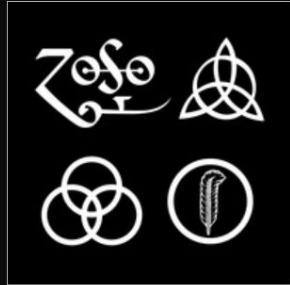


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Artista (wikidata)

Visualizzare i generi musicali di un artista.
Consigliare un brano musicale per genere trovato.



Artista: Led Zeppelin

15.1M followers

classic rock rock hard rock rock and roll

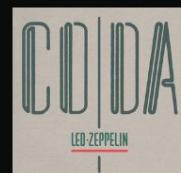
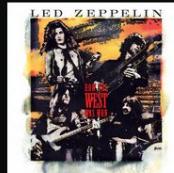
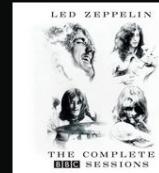
Inizio carriera: 01/01/1968

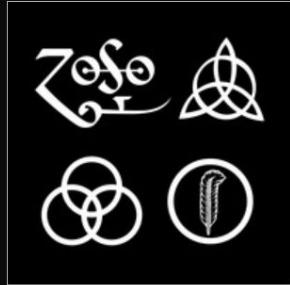
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Artista: Led Zeppelin

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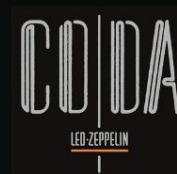
Inizio carriera: 01/01/1968

Grammy Lifetime Achievement Award

Rock and Roll Hall of Fame

Kennedy Center Honors

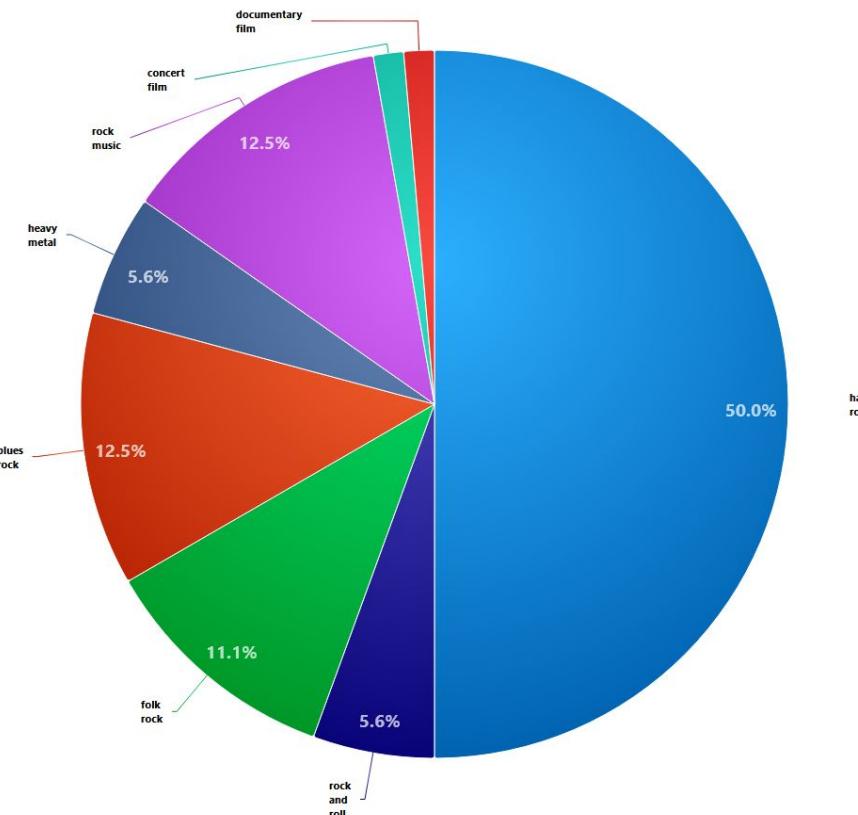
Numero di risultati: 33



X

Generi

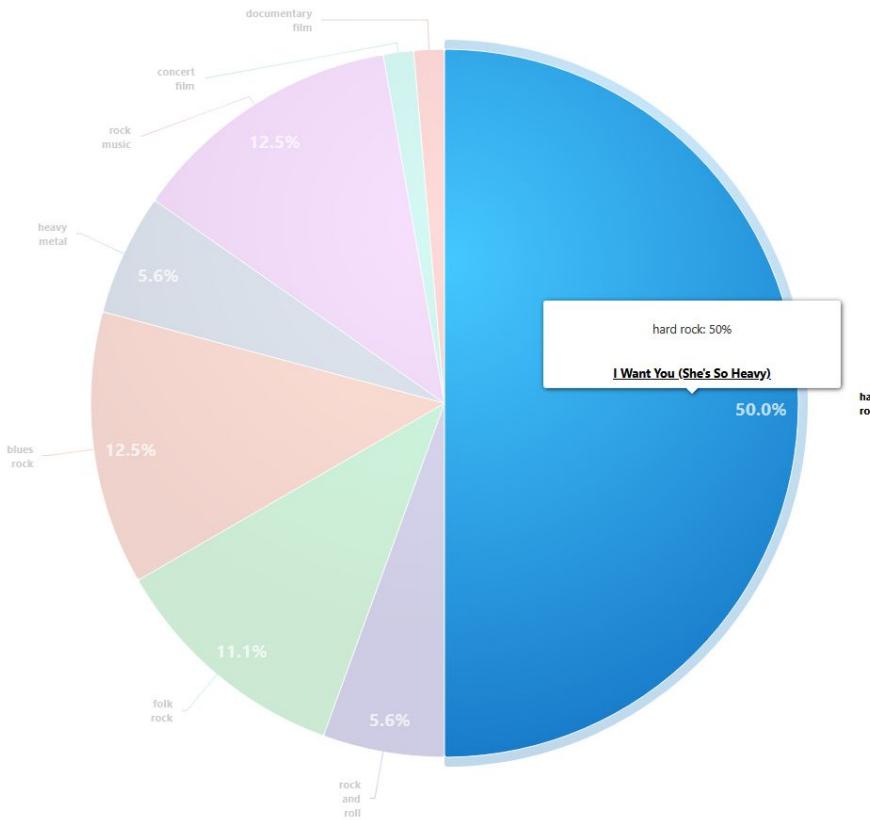
informazioni wikidata su 8 composizioni.

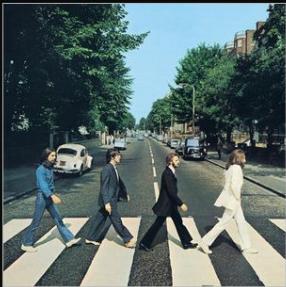


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Generi

informazioni wikidata su 8 composizioni.





Canzone: I Want You (She's So Heavy) - Remastered 2009

The Beatles

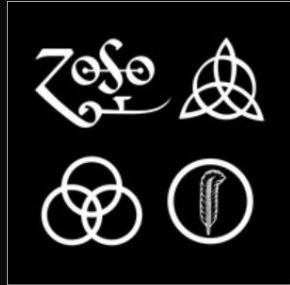
Abbey Road (Remastered)

durata: 07:47

data di pubblicazione: 26/09/1969

Artista (wikidata)

Visualizzare i premi musicali di un artista.
Consigliare un artista che abbia ricevuto lo stesso
premio.



Artista: Led Zeppelin

15.1M followers

classic rock rock hard rock rock and roll

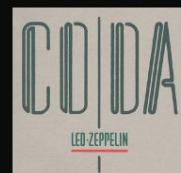
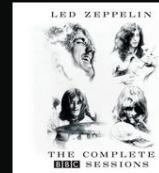
Inizio carriera: 01/01/1968

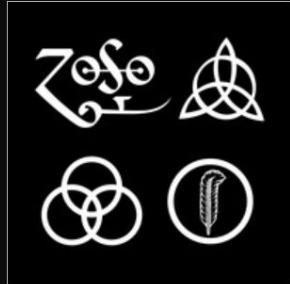
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Artista: Led Zeppelin

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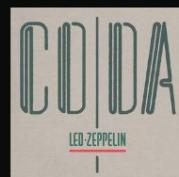
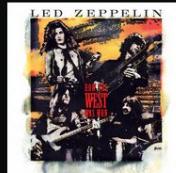
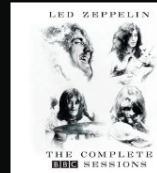
Grammy Lifetime Achievement Award

Grammy Lifetime Achievement Award

Rock and Roll Hall of Fame

Kennedy Center Honors

Numero di risultati: 33





Artista: Isaac Stern

29.5k followers

chamber music classical

Inizio carriera: 21/07/1920

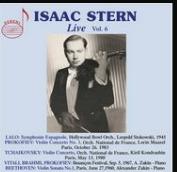
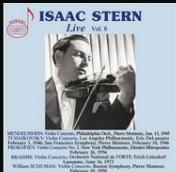
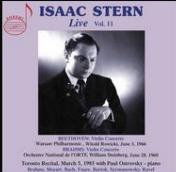
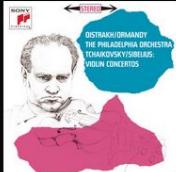
Grammy Award for Best Instrum... Polar Music Prize Wolf Prize in Arts Royal Philharmonic Society Gold... Grammy Lifetime Achievement A...

Library of Congress Living Legend National Medal of Arts star on Hollywood Walk of Fame Gramophone Award for Lifetime ... Grammy Award for Best Cha Grammy Lifetime Achievement Award

Sibelius Medal Leonie Sonning Music Prize Kennedy Center Honors Presidential Medal of Freedom

Numero di risultati: 344

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Playlist (spotify)

Visualizzare la cronologia dei brani compresi nella
playlist.

Playlist: rock

titolo	album	durata
Jumper - 1998 Edit Third Eye Blind	Third Eye Blind	04:32
Dreams - 2004 Remaster Fleetwood Mac	Rumours (Super Deluxe)	04:17
Sunday Bloody Sunday - Remastered 2008 U2	War (Deluxe Edition Remastered)	04:39
Wake Me up When September Ends Green Day	American Idiot	04:45
21 Guns Green Day	21st Century Breakdown	05:21
House Of The Rising Sun The Animals	The Animals	04:31
WONDERWALL - Remastered Oasis	(What's The Story) Morning Glory? [Remastered]	04:18
Iris The Goo Goo Dolls	Dizzy up the Girl	04:49
Fortunate Son Creedence Clearwater Revival	Willy And The Poor Boys (Expanded Edition)	02:20
Bad Moon Rising Creedence Clearwater Revival	Green River (40th Anniversary Edition)	02:21
What a Fool Believes The Doobie Brothers	Minute by Minute	03:43
No Rain Blind Melon	Blind Melon	03:37
I Don't Want To Miss a Thing - From the Touchstone film, "Armageddon..." Aerosmith	I Don't Want To Miss A Thing	04:59

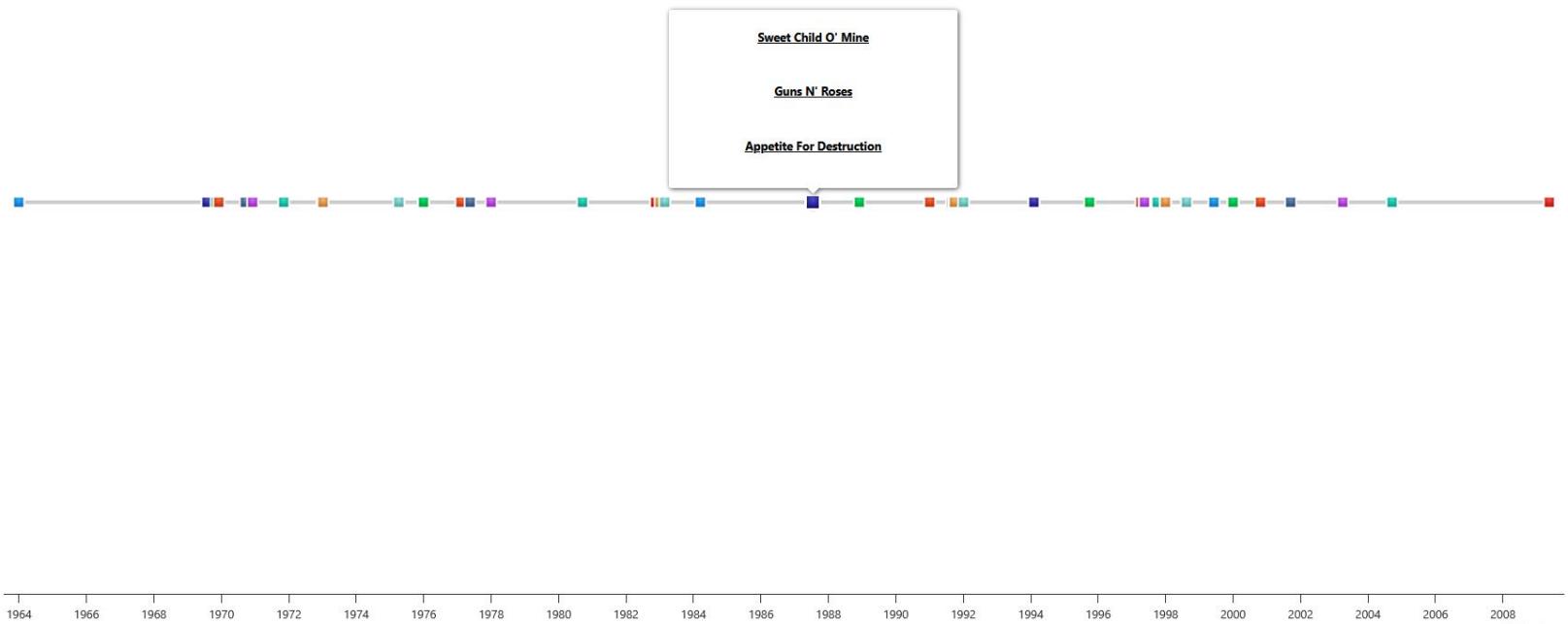
Playlist: rock

titolo	album	durata
Jumper - 1998 Edit Third Eye Blind	Third Eye Blind	04:32
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21 Guns Green Day	21st Century Breakdown	05:21
House Of The Rising Sun The Animals	The Animals	04:31
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I Don't Want To Miss a Thing - From the Touchstone film, "Armagedd... Aerosmith	I Don't Want To Miss A Thing	04:59

X

rock

playlist da 48 pezzi musicali.



Playlist (wikidata)

Visualizzare il luogo di nascita degli artisti compresi
nella playlist.

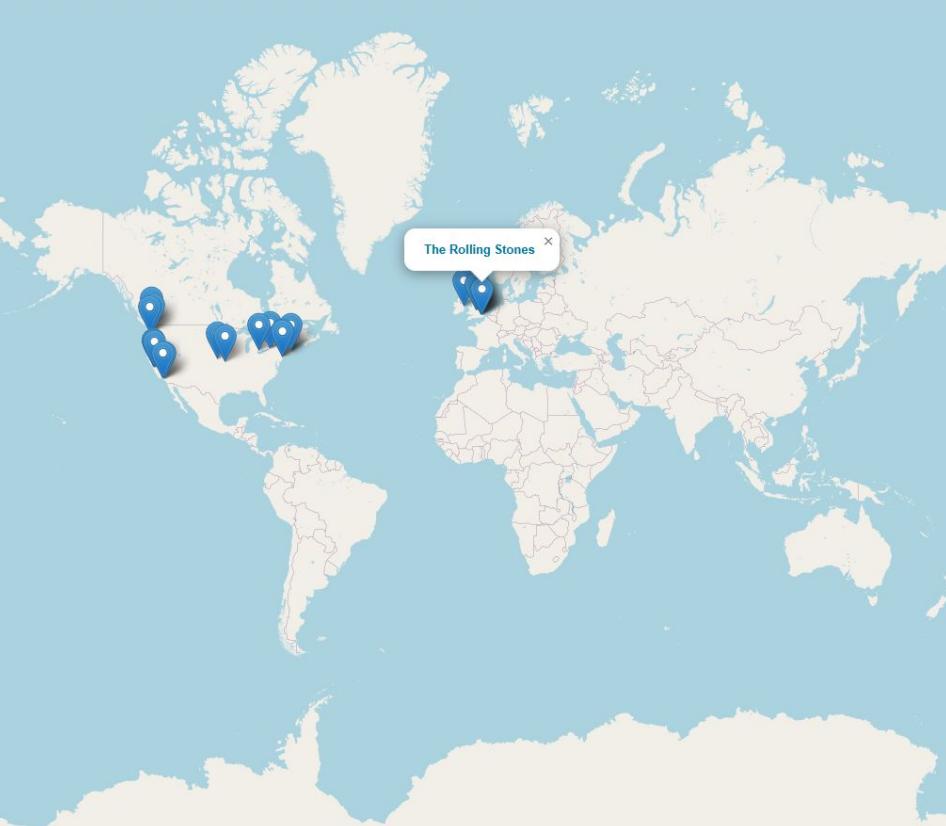
Playlist: rock

titolo	album	durata
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Playlist: rock

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Iris The Goo Goo Dolls	Dizzy up the Girl	04:49
Fortunate Son Creedence Clearwater Revival	Willy And The Poor Boys (Expanded Edition)	02:20
Bad Moon Rising Creedence Clearwater Revival	Green River (40th Anniversary Edition)	02:21
What a Fool Believes The Doobie Brothers	Minute by Minute	03:43
No Rain Blind Melon	Blind Melon	03:37
I Don't Want To Miss a Thing - From the Touchstone film, "Armagedd... Aerosmith	I Don't Want To Miss A Thing	04:59

X



Aerosmith

I Don't Want To Miss A Thing

04:59

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Playlist (spotify)

Visualizzare i generi musicali compresi nella playlist.

Playlist: rock

titolo	album	durata
Jumper - 1998 Edit Third Eye Blind	Third Eye Blind	04:32
Dreams - 2004 Remaster Fleetwood Mac	Rumours (Super Deluxe)	04:17
Sunday Bloody Sunday - Remastered 2008 U2	War (Deluxe Edition Remastered)	04:39
Wake Me up When September Ends Green Day	American Idiot	04:45
21 Guns Green Day	21st Century Breakdown	05:21
House Of The Rising Sun The Animals	The Animals	04:31
WONDERWALL - Remastered Oasis	(What's The Story) Morning Glory? [Remastered]	04:18
Iris The Goo Goo Dolls	Dizzy up the Girl	04:49
Fortunate Son Creedence Clearwater Revival	Willy And The Poor Boys (Expanded Edition)	02:20
Bad Moon Rising Creedence Clearwater Revival	Green River (40th Anniversary Edition)	02:21
What a Fool Believes The Doobie Brothers	Minute by Minute	03:43
No Rain Blind Melon	Blind Melon	03:37
I Don't Want To Miss a Thing - From the Touchstone film, "Armageddon..." Aerosmith	I Don't Want To Miss A Thing	04:59

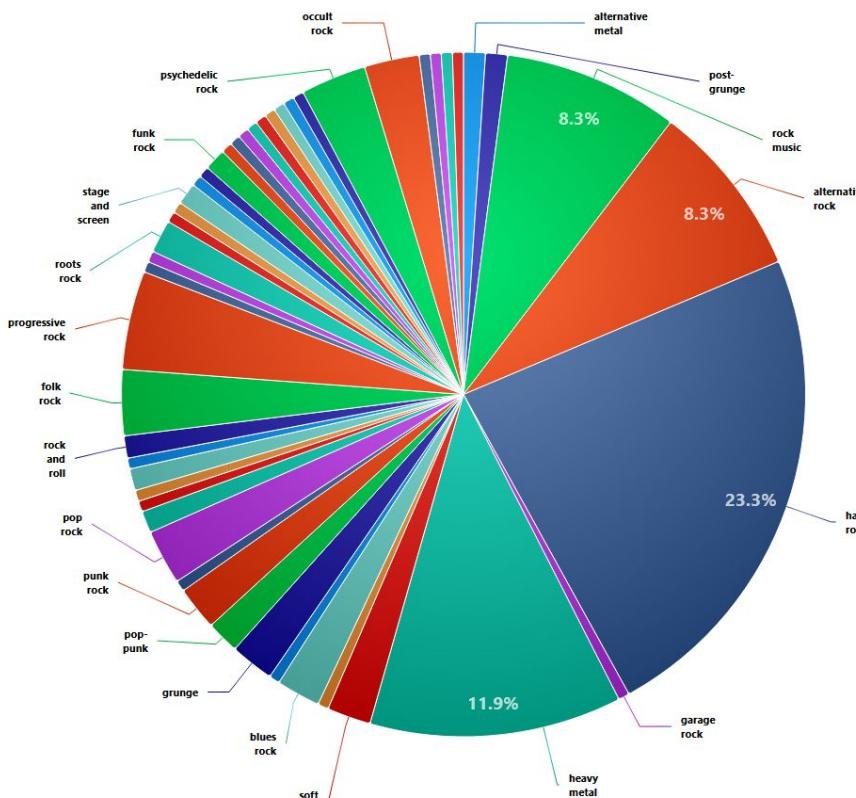
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Generi

informazioni wikidata su 48 composizioni.



Grazie!

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